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**Swan**

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(54) **MODULAR SLEEVE**

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(58) **Field of Search** ..... **42/71.01, 75.01; 42/124**

(56) **References Cited**

#### **U.S. PATENT DOCUMENTS**

3,939,589 A \* 2/1976 Tellie ..... 42/140  
4,845,871 A 7/1989 Swan ..... 42/100  
5,010,676 A \* 4/1991 Kennedy ..... 42/71.01

5,142,806 A 9/1992 Swan ..... 42/100  
5,343,650 A 9/1994 Swan ..... 42/100  
5,412,895 A \* 5/1995 Krieger ..... 42/75.02  
5,533,292 A \* 7/1996 Swan ..... 42/123  
5,826,363 A \* 10/1998 Olson ..... 42/75.01  
6,453,594 \* 9/2002 Griffin ..... 42/105

\* cited by examiner

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(57) **ABSTRACT**

A Swan universal receiver sleeve attached to the top of a firearm upper receiver and extended forward above the firearm barrel to a position just short of the firearm front sight. The underside of the rear portion of the sleeve is fixedly attached to the receiver top. The underside of the forward portion of the sleeve has an upper handguard piece attached thereto. A bottom handguard piece is fitted about the bottom of the gun barrel and is attached to the upper handguard piece. The handguard pieces are not physically connected in any way to the gun barrel. The sleeve is self supported by the connection of the rear portion underside to the receiver top.

**18 Claims, 14 Drawing Sheets**

